

CLAIMS

What is claimed is:

1. A computer implemented method of searching for best matches in a
5 table storing information in multiple rows, wherein each row includes multiple fields,
comprising:
traversing a first tree that stores information from the rows of the table
according to a first value for a first field;
saving the information that is encountered when traversing the first tree in a
10 second tree according to data in a second field; and
traversing the second tree according to a second value for the second field to
determine the best match for the first and second values.
2. The method of claim 1, further building the first tree by retrieving a
15 row, retrieving data from the first field, traversing the first tree according to the data, and
adding information from the row at an appropriate node of the first tree.
3. The method of claim 1, further comprising receiving the first and
20 second values.
4. The method of claim 1, wherein longer matches of the second field take
precedence over longer matches of the first field.
5. The method of claim 1, wherein traversing the second tree includes:
25 traversing the second tree according to the second value for the second field;
saving the information that is encountered when traversing the second tree in a
third tree according to data in a third field; and
traversing the third tree according to a third value for the third field to
determine the best match for the first, second and third values.
30
6. A computer program product that searches for best matches in a table
storing information in multiple rows, wherein each row includes multiple fields, comprising:

computer code that traverses a first tree that stores information from the rows of the table according to a first value for a first field;

computer code that saves the information that is encountered when traversing the first tree in a second tree according to data in a second field;

5 computer code that traverses the second tree according to a second value for the second field to determine the best match for the first and second values; and
a computer readable medium that stores the computer codes.

7. The computer program product of claim 6, wherein the computer
10 readable medium is a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, or data signal embodied in a carrier wave.

8. A computer implemented method of searching for best matches in a table storing information in multiple rows, wherein each row includes multiple fields,
15 comprising:

receiving first and second values, where the first value indicates a desired value for a first field in the table and the second value indicates a desired value for a second field in the table;

traversing a first tree by the first value, wherein the first tree stores at each
20 node information from the rows in the table according to data in the first field;

as each node is traversed, saving the information that is encountered to a second tree according to data in the second field; and

traversing the second tree according to the second value to determine the best match for the first and second values.

25

9. The method of claim 8, further building the first tree by retrieving a row, retrieving data from the first field, traversing the first tree according to the data, and adding information from the row at an appropriate node of the first tree.

30 10. The method of claim 8, wherein longer matches of the second field take precedence over longer matches of the first field.

11. The method of claim 8, wherein traversing the second tree includes:
traversing the second tree according to the second value for the second field;
saving the information that is encountered when traversing the second tree in a
third tree according to data in a third field; and

5 traversing the third tree according to a third value for the third field to
determine the best match for the first, second and third values.

12. A computer program product for mapping a graphical user interface of
an application, comprising:

10 computer code that receives first and second values, where the first value
indicates a desired value for a first field in the table and the second value indicates a desired
value for a second field in the table;

computer code that traverses a first tree by the first value, wherein the first tree
stores at each node information from the rows in the table according to data in the first field;

15 computer code that, as each node is traversed, saves the information that is
encountered to a second tree according to data in the second field;

computer code that traverses the second tree according to the second value to
determine the best match for the first and second values; and

a computer readable medium that stores the computer codes.

20 13. The computer program product of claim 12, wherein the computer
readable medium is a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive,
or data signal embodied in a carrier wave.